EPA REGION 8 QA DOCUMENT REVIEW CROSSWALK

QAPP/FSP/SAP for: *(check appropriate box)*		**Entity** *(grantee, contract, EPA AO, EPA Program, Other)*	**Regulatory Authority** and/or **Funding Mechanism**	___ **2 CFR 1500** for **Grantee/Cooperative Agreements** _X_ **48 CFR 46** for **Contracts** ___ **Interagency Agreement (FFA, USGS)** ___ **EPA/Court Order** ___ **EPA Program Funding** ___ **EPA Program Regulation** ___ **EPA CIO 2105**
	GRANTEE	Weston Solutions, Inc.		
X	**CONTRACTOR**			
	EPA			
	Other			
Document Title *[Note: Title will be repeated in Header]*		SAP for Livingston Memorial Hospital		
QAPP/FSP/SAP Preparer		Michael Cherny		
Period of Performance *(of QAPP/FSP/SAP)*		1 year from date of EPA approval of Task Level QAPP (Last QAPP Revision Feb 2015)	**Date Submitted for Review**	3/28/2018
EPA Project Officer **EPA Project Manager**		Joyce Ackerman Stephanie Shen	**PO Phone #** **PM Phone #**	303-312-6822 303-312-6184
QA Program Reviewer or Approving Official		Stephanie Shen	**Date of Review**	3/30/18

Documents Submitted for QAPP Review (QA Reviewer must complete)*:*

1. QA Document(s) submitted for review:

QA Document	Document Date	Document Stand-alone	Document with QAPP
QAPP	**July 2013**	Yes / **No**	
FSP		Yes / No	Yes / No
SAP	**3/30/18**	Yes / **No**	**Yes** / No
SOP(s)			Yes / No

2. WP/SOW/TO/PP/RP Date _____
   WP/SOW/TO/RP Performance Period _____
3. QA document consistent with the:
   WP/SOW/PP for grants? Yes / No
   SOW/TO for contracts? **Yes** / No
4. QARF signed by R8 QAM Yes / No / NA
   Funding Mechanism IA / **contract** / grant / NA
   Amount _____

Notes for Document Submittals:

1. A QAPP written by a Grantee, EPA, or Federal Partner must include for review:
   Work Plan(WP) / Statement of Work (SOW) / Program Plan (PP) / Research Proposal (RP) and funding mechanism

2. A QAPP written by Contractor must include for review:
   a) Copy of Task Order Work Assignment/SOW
   b) Reference to a hard or electronic copy of the contractor's approved QMP
   c) Copy of Contract SOW if no QMP has been approved
   d) Copy of EPA/Court Order, if applicable
   e) The QA Review must determine (with the EPA CO or PO) if a QARF was completed for the environmental data activity described in the QAPP.

3. a. Field Sampling Plan (FSP) and/or Sampling & Analyses Plan (SAP) must include the Project QAPP *or* must be a stand-alone QA document that contain all QAPP required elements (Project Management, Data Generation/Acquisition, Assessment and Oversight, and Data Validation and Usability).
   b. SOPs must be submitted with a QA document that contains all QAPP required elements.

Summary of Comments *(highlight significant concerns/issues)***:**
1. Comment #1
2. Comment #2
3. Comment #3
4. **The** Weston Solutions, Inc. **must address the comments in the Summary of Comments, as well as those identified in the Comment section(s) that includes a "Response (date)" and Resolved (date)".**

Element	Accept able *Yes/No/ NA*	Page/ Section	Comments
A. Project Management			
A1. Title and Approval Sheet			
a. Contains project title	Yes	SAP Title Page and Introduction SAP Section A1.	
b. Date and revision number line (for when needed)	Yes	SAP Section A1	EPA Comment 3/30/2018 – document saved electronically as Rev 1 but the approval sheet shows 0. Response: revised
c. Indicates organization=s name	Yes	SAP Title Page	
d. Date and signature line for organization=s project manager	Yes	SAP Section A1 QAPP Worksheets 1,2 4,7 & 8	
e. Date and signature line for organization=s QA manager	Yes	QAPP Worksheets 1& 2	
f. Other date and signatures lines, as needed	Yes	SAP Section A1 QAPP Worksheets 4,7 & 8	
A2. Table of Contents			
a. Lists QA Project Plan information sections	Yes	SAP Table of Contents, SAP List of Appendices	
b. Document control information indicated	Yes	SAP Section A1 QAPP Worksheet 1 & 2	
A3. Distribution List			
Includes all individuals who are to receive a copy of the QA Project Plan and identifies their organization	Yes	SAP Section A3 QAPP Worksheet 3 & 5	
A4. Project/Task Organization			
a. Identifies key individuals involved in all major aspects of the project, including contractors	Yes	QAPP Worksheet 3 & 5	
b. Discusses their responsibilities	Yes	QAPP Worksheet 4, 7 & 8	
c. Project QA Manager position indicates independence from unit generating data	Yes	QAPP Worksheet 3 & 5	
d. Identifies individual responsible for maintaining the official, approved QA Project Plan	Yes	SAP Section A1 QAPP Worksheet 4, 7 & 8	
e. Organizational chart shows lines of authority and reporting responsibilities	Yes	QAPP Worksheet 3 & 5	
A5. Problem Definition/Background			

a. States decision(s) to be made, actions to be taken, or outcomes expected from the information to be obtained	Yes	SAP Section A5 QAPP Worksheet 9	EPA comment 3/30/2018: Would you add an additional bullet for investigating the presence and extent of LBP and lead lined construction material. Response: added
b. Clearly explains the reason (site background or historical context) for initiating this project	Yes	SAP Section A5	EPA Comment 3/30/2018 – worksheet 10 does not exist in this document. Response: located SAP Section A5
c. Identifies regulatory information, applicable criteria, action limits, etc. necessary to the project	Yes	SAP Section A5 and Worksheet 15	
A6. Project/Task Description			
a. Summarizes work to be performed, for example, measurements to be made, data files to be obtained, etc., that support the project=s goals	Yes	SAP Section A6 SAP Worksheet 14 & 16	
b. Provides work schedule indicating critical project points, e.g., start and completion dates for activities such as sampling, analysis, data or file reviews, and assessments	Yes	SAP Worksheet 14 & 16	
c. Details geographical locations to be studied, including maps where possible	Yes	SAP Section A6 & A7	
d. Discusses resource and time constraints, if applicable	Yes	SAP Section A6	
A7. Quality Objectives and Criteria			
a. Identifies - performance/measurement criteria for all information to be collected and acceptance criteria for information obtained from previous studies, - including project action limits and laboratory detection limits and - range of anticipated concentrations of each parameter of interest	Yes	SAP Worksheet 15 QAPP Worksheet 13 QAPP Worksheets 12.1 - 12.4	
b. Discusses precision	Yes	QAPP Worksheet 37	
c. Addresses bias	Yes	QAPP Worksheet 37	
d. Discusses representativeness	Yes	QAPP Worksheet 37	
e. Identifies the need for completeness	Yes	QAPP Worksheet 37	
f. Describes the need for comparability	Yes	QAPP Worksheet 37	
g. Discusses desired method sensitivity	Yes	QAPP Worksheet 37	
A8. Special Training/Certifications			
a. Identifies any project personnel specialized training or certifications	Yes	SAP Section A4 QAPP Worksheet 4, 7 & 8	
b. Discusses how this training will be provided	Yes	QAPP Worksheet 4, 7 & 8	
c. Indicates personnel responsible for assuring training/certifications are satisfied	Yes	QAPP Worksheet 4, 7 & 8	

d. identifies where this information is documented	Yes	QAPP Worksheet 4, 7 & 8	
A9. Documentation and Records			
a. Identifies report format and summarizes all data report package information	Yes	SAP Worksheet 14 & 16 QAPP Worksheet 29	
b. Lists all other project documents, records, and electronic files that will be produced	Yes	SAP Worksheet 14 & 16	
c. Identifies where project information should be kept and for how long	Yes	QAPP Worksheet 29	
d. Discusses back up plans for records stored electronically	Yes	SAP A9. QAPP Worksheet 29	
e. States how individuals identified in A3 will receive the most current copy of the approved QA Project Plan, identifying the individual responsible for this	Yes	SAP Introduction QAPP Worksheet 4 & 5	
B. Data Generation/Acquisition			
B1. Sampling Process Design (Experimental Design)			
a. Describes and justifies design strategy, indicating size of the area, volume, or time period to be represented by a sample	Yes	SAP Section B1. SAP Table 1	EPA comment 3/30/18: Describe where – are the asbestos wipe samples being taken in the crawl space or somewhere else? If so, what is the benefit of taking the sample in the crawl space – just to let people know there are fibers there and they should not enter without a respirator? Response: revised SAP to include
b. Details the type and total number of sample types/matrix or test runs/trials expected and needed	Yes	SAP Section B1. SAP Table 1	
c. Indicates where samples should be taken, how sites will be identified/located	Yes	SAP Section B1. SAP Table 1	
d. Discusses what to do if sampling sites become inaccessible	Yes	SAP Section B1.	
e. Identifies project activity schedules such as each sampling event, times samples should be sent to the laboratory, etc.	Yes	SAP Worksheet 14 & 16 SAP Table 1	
f. Specifies what information is critical and what is for informational purposes only	Yes	SAP Section B1.	EPA comment 3/30/18: are the dust samples critical or informational? Response: clarified in SAP
g. Identifies sources of variability and how this variability should be reconciled with project information	Yes	QAPP Worksheet 17	Worksheet 17 is not included in the SAP – QAPP Worksheet 17? Revised crosswalk – QAPP worksheet 17
B2. Sampling Methods			
a. Identifies all sampling SOPs by number, date, and regulatory citation, indicating sampling options or modifications to be taken	Yes	SAP Section B2. QAPP Worksheet 21	
b. Indicates how each sample/matrix type should be collected	Yes	SAP Section B2. and SAP Table 1 QAPP Worksheet 19 & 30	

c. If in situ monitoring, indicates how instruments should be deployed and operated to avoid contamination and ensure maintenance of proper data	Yes	QAPP Worksheet 22	
d. If continuous monitoring, indicates averaging time and how instruments should store and maintain raw data, or data averages	Yes	QAPP Worksheet 22	
e. Indicates how samples are to be homogenized, composited, split, or filtered, if needed	Yes	SAP Section B2.	
f. Indicates what sample containers and sample volumes should be used	Yes	SAP Section B2. and SAP Table 1 QAPP Worksheet 19 & 30	
g. Identifies whether samples should be preserved and indicates methods that should be followed	Yes	SAP Section B2. and SAP Table 1 QAPP Worksheet 19 & 30	
h. Indicates whether sampling equipment and samplers should be cleaned and/or decontaminated, identifying how this should be done and by-products disposed of	Yes	QAPP Worksheet 21	
i. Identifies any equipment and support facilities needed	Yes	SAP Worksheet 22	
j. Addresses actions to be taken when problems occur, identifying individual(s) responsible for corrective action and how this should be documented	Yes	SAP Worksheet 31, 32 & 33	
B3. Sample Handling and Custody			
a. States maximum holding times allowed from sample collection to extraction and/or analysis for each sample type and, for in-situ or continuous monitoring, the maximum time before retrieval of information	Yes	SAP Table 1 QAPP Worksheet 19 & 30	
b. Identifies how samples or information should be physically handled, transported, and then received and held in the laboratory or office (including temperature upon receipt)	Yes	SAP Table 1 SAP Worksheet 26 & 27	
c. Indicates how sample or information handling and custody information should be documented, such as in field notebooks and forms, identifying individual responsible	Yes	SAP Section B3. SAP Worksheets 26 & 27	
d. Discusses system for identifying samples, for example, numbering system, sample tags and labels, and attaches forms to the plan	Yes	SAP Worksheet 26 & 27	
e. Identifies chain-of-custody procedures and includes form to track custody	Yes	SAP Worksheet 26 & 27	
B4. Analytical Methods			
a. Identifies all analytical SOPs (field, laboratory and/or office) that should be followed by number, date, and regulatory citation, indicating options or modifications to be taken, such as sub-sampling and extraction procedures	Yes	SAP Section B2. QAPP Worksheet 23	EPA comment 3/30/2018: Would you add the corresponding screening level of 400 ppm for residential soils here.What is the regulatory critieria for the wipe samples? Would you had the sampling analytical procedures or SOPs for the wipe samples. Response: added/revised SAP.

b. Identifies equipment or instrumentation needed	Yes	QAPP Worksheets 23, 24	
c. Specifies any specific method performance criteria	Yes	QAPP Worksheets 23, 24	
d. Identifies procedures to follow when failures occur, identifying individual responsible for corrective action and appropriate documentation	Yes	QAPP Worksheet 22, 24	
e. Identifies sample disposal procedures	Yes	SAP Worksheet 26 & 27 QAPP Appendix I	
f. Specifies laboratory turnaround times needed	Yes	QAPP Worksheet 19 & 30	
g. Provides method validation information and SOPs for nonstandard methods	Yes	QAPP Worksheets 23, 25 & 28	
B5. Quality Control			
a. For each type of sampling, analysis, or measurement technique, identifies QC activities which should be used, for example, blanks, spikes, duplicates, etc., and at what frequency	Yes	SAP Section B5.	
b. Details what should be done when control limits are exceeded, and how effectiveness of control actions will be determined and documented	Yes	SAP Worksheets 25, 26 & 27 QAPP Worksheet 28	
c. Identifies procedures and formulas for calculating applicable QC statistics, for example, for precision, bias, outliers and missing data	Yes	SAP Worksheet 37	
B6. Instrument/Equipment Testing, Inspection, and Maintenance			
a. Identifies field and laboratory equipment needing periodic maintenance, and the schedule for this	Yes	SAP Worksheets 22, 24, and 25	
b. Identifies testing criteria	Yes	SAP Worksheets 22, 24, and 25	
c. Notes availability and location of spare parts	Yes	SAP Worksheets 22, 24, and 25	
d. Indicates procedures in place for inspecting equipment before usage	Yes	SAP Worksheets 22, 24, and 25	
e. Identifies individual(s) responsible for testing, inspection and maintenance	Yes	SAP Worksheets 22, 24, and 25	
f. Indicates how deficiencies found should be resolved, re-inspections performed, and effectiveness of corrective action determined and documented	Yes	SAP Worksheets 22, 24	
B7. Instrument/Equipment Calibration and Frequency			
a. Identifies equipment, tools, and instruments that should be calibrated and the frequency for this calibration	Yes	SAP Worksheets 22 and 24	
b. Describes how calibrations should be performed and documented, indicating test criteria and standards or certified equipment	Yes	SAP Worksheet 22, 26 & 27	
c. Identifies how deficiencies should be resolved and documented	Yes	SAP Worksheet 22, 26 & 27	
a. Identifies critical supplies and consumables for field and laboratory, noting supply source, acceptance criteria, and procedures for tracking, storing and retrieving these materials	Yes	SAP Attachment B SAP Attachment D SAP Worksheets 22, 26 & 27	

b. Identifies the individual(s) responsible for this	Yes	SAP Attachment B SAP Attachment D SAP Worksheets 22, 26 & 27	
B9. Use of Existing Data (Non-direct Measurements)			
a. Identifies data sources, for example, computer databases or literature files, or models that should be accessed and used	Yes	SAP Worksheet 13	
b. Describes the intended use of this information and the rationale for their selection, i.e., its relevance to project	Yes	SAP Worksheet 13	
c. Indicates the acceptance criteria for these data sources and/or models	Yes	SAP Worksheet 13	
d. Identifies key resources/support facilities needed	Yes	SAP Worksheet 13	
e. Describes how limits to validity and operating conditions should be determined, for example, internal checks of the program and Beta testing	Yes	SAP Worksheet 13	
B10. Data Management			
a. Describes data management scheme from field to final use and storage	Yes	SAP Worksheets 26 & 27, 29, and 35	
b. Discusses standard record-keeping and tracking practices, and the document control system or cites other written documentation such as SOPs	Yes	SAP Section B10. SAP Worksheets 26 & 27, 29	
c. Identifies data handling equipment/procedures that should be used to process, compile, analyze, and transmit data reliably and accurately	Yes	SAP Section B10. SAP Worksheets 22 and 29 QAPP Worksheet 23	
d. Identifies individual(s) responsible for this	Yes	SAP Worksheet 29	
e. Describes the process for data archival and retrieval	Yes	SAP Worksheet 29	
f. Describes procedures to demonstrate acceptability of hardware and software configurations	Yes	SAP Worksheet 22 QAPP Worksheet 23	
g. Attaches checklists and forms that should be used	Yes	SAP Section B10.	
C. Assessment and Oversight			
C1. Assessments and Response Actions			
a. Lists the number, frequency, and type of assessment activities that should be conducted, with the approximate dates	Yes	SAP Worksheet 31, 32 & 33	
b. Identifies individual(s) responsible for conducting assessments, indicating their authority to issue stop work orders, and any other possible participants in the assessment process	Yes	SAP Worksheet 31, 32 & 33	
c. Describes how and to whom assessment information should be reported	Yes	SAP Worksheet 31, 32 & 33	
d. Identifies how corrective actions should be addressed and by whom, and how they should be verified and documented	Yes	SAP Worksheet 31, 32 & 33	
C2. Reports to Management			
a. Identifies what project QA status reports are needed and how frequently	Yes	SAP Worksheet 31, 32 & 33	

b. Identifies who should write these reports and who should receive this information	Yes	SAP Worksheet 31, 32 & 33	
D. Data Validation and Usability			
D1. Data Review, Verification, and Validation			
Describes criteria that should be used for accepting, rejecting, or qualifying project data	Yes	SAP Worksheet 36	
D2. Verification and Validation Methods			
a. Describes process for data verification and validation, providing SOPs and indicating what data validation software should be used, if any	Yes	QAPP Worksheet 34 SAP Worksheets 35 and 36	
b. Identifies who is responsible for verifying and validating different components of the project data/information, for example, chain-of-custody forms, receipt logs, calibration information, etc.	Yes	SAP Worksheet 35	
c. Identifies issue resolution process, and method and individual responsible for conveying these results to data users	Yes	SAP Worksheets 35 and 36	
d. Attaches checklists, forms, and calculations	Yes	QAPP Worksheet 34 SAP Worksheet 37 QAPP Appendix O, P, Q, R	
D3. Reconciliation with User Requirements			
a. Describes procedures to evaluate the uncertainty of the validated data	Yes	SAP Worksheets 12 and 37 QAPP Appendix J	
b. Describes how limitations on data use should be reported to the data users	Yes	SAP Worksheet 37	